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FORMAT ENHANCED  
NEWS 4 Feb 1 Addition of Machine-Translated Abstracts to CAPlus  
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ZREGISTRY, and CASREACT  
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NEWS 11 Mar 1 New IMSDIRECTOR Provides Pharma Company Details  
  
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FILE 'HOME' ENTERED AT 09:57:12 ON 07 MAR 2000

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.15	0.15

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Structure search limits have been increased. See HELP SLIMIT for details.

=> s futhan/cn

L1 1 FUTHAN/CN

=> d

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2000 ACS

RN 82956-11-4 REGISTRY

CN Benzoic acid, 4-[(aminoiminomethyl)amino]-, 6-(aminoiminomethyl)-2-naphthalenyl ester, dimethanesulfonate (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 6-Amidino-2-naphthyl p-guanidinobenzoate

CN FUT 175

CN **Futhan**

CN Nafamostat mesilate

CN Nafamostat mesylate

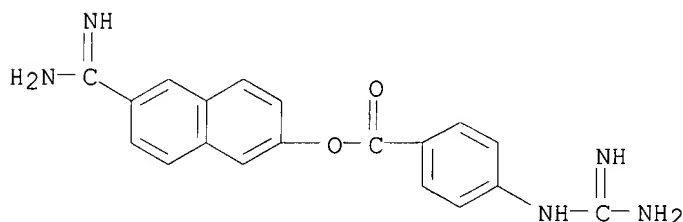
MF C19 H17 N5 O2 . 2 C H4 O3 S

LC STN Files: ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CAPLUS, CBNB, CIN, DDFU, DRUGPAT, DRUGU, DRUGUPDATES, EMBASE, IMSDIRECTOR, IPA, MRCK\*, PHAR, PROMT, RTECS\*, TOXLINE, TOXLIT, USAN, USPATFULL  
(\*File contains numerically searchable property data)

CM 1

CRN 81525-10-2

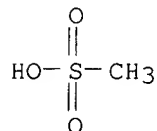
CMF C19 H17 N5 O2



CM 2

CRN 75-75-2

CMF C H4 O3 S



204 REFERENCES IN FILE CA (1967 TO DATE)

2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

206 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> index bioscience ents

FILE 'DRUGMONOG' ACCESS NOT AUTHORIZED  
FILE 'APIPAT2' ACCESS NOT AUTHORIZED  
FILE 'PAPERCHEM' ACCESS NOT AUTHORIZED  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
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FULL ESTIMATED COST

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BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, CABA,  
CANCERLIT,  
CAPLUS, CEABA, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE,  
DRUGB,  
DRUGLAUNCH, DRUGMONOG2, DRUGNL, ...' ENTERED AT 10:01:09 ON 07 MAR 2000

70 FILES IN THE FILE LIST IN STNINDEX

Enter SET DETAIL ON to see search term postings or to view  
search error messages that display as 0\* with SET DETAIL OFF.

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6 FILES HAVE ONE OR MORE ANSWERS, 70 FILES SEARCHED IN STNINDEX

L2 QUE L1

=> s myocardial infarction?

17745 FILE ADISALERTS  
276 FILE ADISINSIGHT  
230 FILE AGRICOLA  
84 FILE AIDSLINE  
96 FILE ANABSTR  
8 FILE AQUASCI  
505 FILE BIOBUSINESS  
285 FILE BIOCOMMERCE  
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9103 FILE DDFU  
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11575 FILE DRUGU  
28 FILES SEARCHED...  
564 FILE EMBAL  
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8 FILE GENBANK  
260 FILE HEALSAFE  
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62365 FILE SCISEARCH  
10824 FILE TOXLINE  
4304 FILE TOXLIT  
5472 FILE USPATFULL  
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3291 FILE WPINDEX  
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458 FILE DPCI

967 FILE EUROPATFULL  
266 FILE INPADOC  
59 FILES SEARCHED...  
275 FILE JAPIO  
161 FILE PATOSEP  
166 FILE PATOSWO  
1 FILE PIRA  
1 FILE RAPRA

59 FILES HAVE ONE OR MORE ANSWERS, 70 FILES SEARCHED IN STNINDEX

L3 QUE MYOCARDIAL INFARCTION?

=> s 12 and 13

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0 FILES HAVE ONE OR MORE ANSWERS, 70 FILES SEARCHED IN STNINDEX

L4 QUE L2 AND L3

=> file caplus, uspatfull, biosis, medline

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

FULL ESTIMATED COST

ENTRY  
2.70

SESSION  
9.67

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FILE 'MEDLINE' ENTERED AT 10:04:28 ON 07 MAR 2000

=> d his

(FILE 'HOME' ENTERED AT 09:57:12 ON 07 MAR 2000)

FILE 'REGISTRY' ENTERED AT 09:57:40 ON 07 MAR 2000  
L1 1 S FUTHAN/CN

INDEX 'ADISALERTS, ADISINSIGHT, AGRICOLA, AIDSLINE, ANABSTR, AQUASCI,  
BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, CABA,  
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CAPLUS, CEABA, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE,  
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DRUGLAUNCH, DRUGMONOG2, DRUGNL, ...' ENTERED AT 10:01:09 ON 07 MAR 2000  
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L3 QUE MYOCARDIAL INFARCTION?

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SEA L2 AND L3  
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0\* FILE PATOSWO

L4 QUE L2 AND L3  
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FILE 'CAPLUS, USPATFULL, BIOSIS, MEDLINE' ENTERED AT 10:04:28 ON 07 MAR  
2000

=> s 11

L5 338 L1



=> s myocardial infarction?

L6 166534 MYOCARDIAL INFARCTION?

=> s 15 (p) 16

L7 0 L5 (P) L6

=> s 15 and 16

L8 1 L5 AND L6

=> d

L8 ANSWER 1 OF 1 BIOSIS COPYRIGHT 2000 BIOSIS

AN 1998:475040 BIOSIS

DN PREV199800475040

TI Interleukin-6 derived from hypoxic myocytes promotes neutrophil-mediated reperfusion injury in myocardium.

AU Sawa, Yoshiki (1); Ichikawa, Hajime; Kagisaki, Koji; Ohata, Toshihiro; Matsuda, Hikaru

CS (1) First Dep. Surg., Osaka Univ. Med. Sch., 2-2 Yamada-oka, Suita, Osaka 565 Japan

SO Journal of Thoracic and Cardiovascular Surgery, (Sept., 1998) Vol. 116, No. 3, pp. 511-517.

ISSN: 0022-5223.

DT Article

LA English

=> s disorder?

L9 1124119 DISORDER?

=> s 15 and 19

L10 37 L5 AND L9

=> s treat? or prevent?

L11 7287122 TREAT? OR PREVENT?

=> s 111 and 110

L12 28 L11 AND L10

=> d 1-28 ab, bib

L12 ANSWER 1 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB In this uncontrolled, ~~unblinded~~ efficacy study, 33 patients with disseminated intravascular coagulation (DIC) or the prodromal stage (preDIC) of the condition were **treated** with nafamostatmesylate (NM) administered intermittently to examine whether this regimen would be as efficacious as the std. regimen without causing an increase in drug toxicity. Efficacy was evaluated on the basis of the results of coagulation studies and on improvement in the DIC score, which was calcd. by adding the points of the underlying diseases, clin. symptoms, prothrombin ratio, fibrinogen, and fibrin degrdn. product (FDP)-E fraction. A score of 3 points was categorized as preDIC, and 4 or more

as

DIC. In Japan, the FDP-E fraction is often measured as a substitute for FDP because the value of the FDP-E fraction changes in a wider range and shows more sensitive responses than FDP. NM is usually given by 24-h continuous administration; in this study, NM was infused intermittently

at

a daily dose of 150 mg i.v. to avoid hyperkalemia. Each infusion lasted 4 h, and the interval between administrations was 2.95  $\pm$  0.19

h.

After 7 days of **treatment**, the mean DIC score decreased significantly from 3.9  $\pm$  0.1 to 2.0  $\pm$  0.2 ( $P < 0.001$ ); after 14

days

of **treatment**, the score was 2.0  $\pm$  0.2 ( $P < 0.001$ ); at the end of **treatment**, the score was 1.3  $\pm$  0.2 ( $P < 0.001$ ). The improvement in clin. symptoms was considered to be excellent in 8 of 33 patients and good in 16, for an efficacy rate of 72.7% (24 of 33). Although the mean serum potassium level increased significantly, no patient developed hyperkalemia. The administration of NM in intermittent divided doses was found to be highly effective in the **treatment** of DIC in patients with the hemopoietic malignancies.

AN

1996:261622 CAPLUS

DN

124:332455

TI

Effects of intermittent nafamostat mesylate in divided doses in patients with disseminated intravascular coagulation occurring with hematopoietic malignancies

AU

Yonekura, Shuji; Umeda, Yoshikatsu; Ogawa, Yoshiaki; Watanabe, Shigeki; Kawada, Hiroshi; Masumoto, Akira; Fukuda, Ryuki; Sasao, Tamotsu; Nagao, Tadami

CS

School Medicine, Tokai University, Isehara, Japan

SO

Curr. Ther. Res. (1996), 57(3), 203-14

CODEN: CTCEA9; ISSN: 0011-393X

DT

Journal

LA

English

L12 ANSWER 2 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB

A review with 79 refs. of pharmacol. effects of the protease inhibitor nafamostat mesilate and its efficacy in **treating** disseminated intravascular coagulation, cerebral vasospasm, and acute pancreatitis.

AN

1995:838385 CAPLUS

DN

123:274874

TI

Nafamostat mesilate

AU

Okajima, Kenji; Uchiba, Mitsuhiro; Murakami, Kazunori

CS

Medical School, Kumamoto University, Kumamoto, Japan

SO

Cardiovasc. Drug Rev. (1995), Volume Date 1995, 13(1), 51-65

CODEN: CDREEA; ISSN: 0897-5957

DT

Journal; General Review

LA

English

L12 ANSWER 3 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB

Nafamostat mesylate (NM), a synthetic protease inhibitor, is frequently used for the **treatment** of disseminated intravascular coagulation (DIC) in Japan. NM inhibits several proteases which may be importantly involved in the pathophysiol. of DIC. Since tissue factor (TF) plays a crit. role in DIC assocd. with septicemia, inhibition of the extrinsic pathway of coagulation by coagulation inhibitors may be useful for the **treatment** of DIC. NM inhibited extrinsic pathway activity (TF-F.VIIa mediated-F.Xa generation) in a concn. dependent manner; the IC50 was 1.0  $\times 10^{-7}$  M. F.Xa was not inhibited by NM at the concns. used in the expt., suggesting that NM might inhibit TF-F.VIIa complex activity. When incubation with TF-F.VIIa complex, NM inhibited the complex activity with an IC50 of 1.5  $\times 10^{-7}$  M, the same value that found for inhibition of extrinsic pathway activity. A Lineweaver-Burk's plot of the inhibition demonstrated that NM inhibited TF-F.VIIa complex

in

a competitive fashion, with an inhibition const. ( $K_i$ ) of 2.0  $\times 10^{-7}$  M. These findings suggested that NM may be a potent inhibitor of TF-F.VIIa complex and the therapeutic effect of NM in DIC patients could be partly explained by inhibition of the extrinsic pathway of the coagulation system.

AN

1994:260934 CAPLUS

DN

120:260934

TI

Effect of nafamostat mesylate, a synthetic protease inhibitor, on tissue

factor-factor V complex activity  
AU Uchiba, Mitsuhiro; Okajima, Kenji; Abe, Hiroki; Uchibe, Hiroaki;  
Takatsuki,  
Kiyoshi  
CS Dep. Med., Kumamoto Univ. Med. Sch., Kumamoto, 860, Japan  
SO Thromb. Res. (1994), 74(2), 155-61  
CODEN: THBRAA; ISSN: 0049-3848  
DT Journal  
LA English

L12 ANSWER 4 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB Effect of nafamostat mesilate on the canine kidney Na, K-ATPase activity and human erythrocyte Na, K-pump activity was studied. Nafamostat mesilate dose-dependently inhibited the Na, K-ATPase activity (IC50 being  $3.2 \times 10^{-5}M$ ) and the Na, K-pump activity (IC50  $10^{-4}M$ ). The nafamostat mesilate metabolites amidinonaphthol and p-quanidinobenzoic acid had no such effect. Hyperkalemic state in some nafamostat mesilate-treated patients may be due to inhibition of Na, K-ATPase.

AN 1994:95144 CAPLUS

DN 120:95144

TI Effect of a protease inhibitor, nafamostat mesilate on sodium-potassium pump activity

AU Kojima, Shunichi

CS Dep. Med., Natl. Cardiovasc. Cent. Hosp., Japan

SO Yakuri to Chiryo (1993), 21(6), 1729-34

CODEN: YACHDS; ISSN: 0386-3603

DT Journal

LA Japanese

L12 ANSWER 5 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB The fragments of fibrin/fibrinogen degradn. products (FDP) were characterized in 4 patients with disseminated intravascular coagulation (DIC), that were caused by various diseases. In the patients with acute lymphoblastic leukemia (case 1) and acute suppurative cholangitis (case 3), DD and DY/X fragments resulting from fibrinolysis accounted for the most part of the FDP fragments. In case 3, D fragments resulting from fibrinogenolysis were also obsd. to much less extent. In a DIC assocd. with acute myeloblastic leukemia (case 2), both fibrinolysis and fibrinogenolysis were increased and resulted in high levels of D, Y and DY/X fragments, concomitant with moderate levels of DD and high mol. wt. (HMW) fragments in the patient's sera. The increased fibrinogenolysis in this case was attributed to accelerated activation of plasmin. In a DIC patient of case 4, who underwent an operation due to hepatocellular carcinoma, marked increase in DY/X and HMW fragments and slight increase in DD fragment were obsd. on the day of operation. Hyperfibrinolysis documented in case 4 was explained by both increased prodn. of thrombin and moderately accelerated activation of plasmin. Both qual. and quant. change in the fragments of FDP during the courses of **treatment** in 2 cases of DIC were also noted. In summary, each underlying disease expresses characteristic pattern of FDP fragments in DIC.

AN 1993:57378 CAPLUS

DN 118:57378

TI Studies on the fragments of FDP in 4 patients with DIC

AU Okumura, Nobuo; Furuwatari, Chizumi; Ishikawa, Shinsuke; Furihata, Kenichi; Katsuyama, Tsutomu; Kanai, Masamitsu; Nakahata, Tatsutoshi; Saitoh, Hiroshi

CS Hosp., Shinshu Univ., Matsumoto, 390, Japan

SO Rinsho Byori (1992), 40(10), 1089-95

CODEN: RBYOAI; ISSN: 0047-1860

DT Journal

LA Japanese

L12 ANSWER 6 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB Nafamostat mesilate (FUT-175) **prevents** the redistribution of lysosomal enzyme and the colocalization of lysosomal hydrolases and digestive enzyme of pancreatic acinar cells in caerulein-induced acute

pancreatitis. s, FUT-175 acts on subcellular ganelles inside acinar cells as well as on cellular membranes and protects against pancreatitis.

AN 1991:623158 CAPLUS

DN 115:223158

TI Nafamostat mesilate **prevents** lysosomal enzyme redistribution in cerulein-induced pancreatitis

AU Hirano, Tetsuya; Manabe, Tadao; Imanishi, Katsuhiko; Ando, Katsuhiko; Kyogoku, Takahisa; Tobe, Takayoshi

CS Fac. Med., Kyoto Univ., Kyoto, Japan

SO Med. Sci. Res. (1991) 19(14), 463-4

CODEN: MSCREJ; ISSN: 0269-8951

DT Journal

LA English

L12 ANSWER 7 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB Acute pancreatitis was induced in 13 anesthetized dogs by retrograde injection of bile mixed with trypsin into the pancreatic duct. Six animals were **treated** with i.v. infusion of new synthetic antiprotease, Nafamostat Mesilate, at a dose of 1 mg/kg/h. Four out of 7 untreated animals died during the expt. All the **treated** dogs survived. Hemodynamic data were regularly monitored during a 10-h observation period. Cardiac output, mean arterial pressure and left ventricular stroke vol. decreased rapidly in the untreated animals. An increase in systemic vascular resistance and pulmonary vascular

resistance

was obsd. in dogs without **treatment**. Nafamostat Mesilate given as therapy significantly improved the hemodynamic parameters, and **prevented** the animals from developing shock. The study demonstrates an advantageous influence of synthetic antiprotease Nafamostat Mesilate on the course of acute exptl. pancreatitis.

AN 1991:526765 CAPLUS

DN 115:126765

TI Beneficial effect of therapeutic infusion of nafamostat mesilate (FUT-175)

on hemodynamics in experimental acute pancreatitis

AU Dobosz, M.; Sledzinski, Z.; Juszkiwicz, P.; Babicki, A.; Stanek, A.; Wajda, Z.; Basinski, A.

CS 2nd Dep. Gen. Surg., Med. Acad., Gdansk, Pol.

SO Hepato-Gastroenterology (1991), 38(2), 139-42

CODEN: HEGAD4; ISSN: 0172-6390

DT Journal

LA English

L12 ANSWER 8 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB The coagulation disturbance obsd. during severe acute pancreatitis before and after the infusion of a new synthetic low mol. wt. protease inhibitor (Fut-175) was compared. The coagulo-fibrinolytic changes after acute pancreatitis was induced by the intraductal injection of an autologous bile and trypsin mixt. showed decreased platelet counts, decreased plasma fibrinogen levels, prolonged partial prothrombin time and increased fibrinogen degrdn. products. In addn., markers of hypercoagulation

showed

increased fibrino-peptide A and decreased antithrombin III. The two markers of fibrinolysis showed increased B.beta.15-42 immunoreactive peptide and decreased .alpha.2 antiplasmin. After the infusion of Fut-175, the coagulo-fibrinolytic abnormalities, which were obsd. during severe acute pancreatitis without infusion of Fut-175, were improved. Furthermore, Fut-175 could suppress the rise in fibrino-peptide A and B.beta.15-42 immunoreactive peptide and decrease in antithrombin III and .alpha.2 antiplasmin. Thus, Fut-175 seems to be an effective inhibitor

of

protease-mediated hypercoagulation and fibrinolysis in severe acute pancreatitis.

AN 1991:421867 CAPLUS

DN 115:21867

TI Effect of a synthetic protease inhibitor (Fut-175) on coagulation

abnormalities during experimental acute pancreatitis in dogs  
AU Satake, Katsusuke; Ha, Sin Su; Hiura, Akihito; Nishiwaki, Hideki; Haku, Aizo; Umeyama, Kaoru  
CS Med. Sch., Osaka City Univ., Osaka, 545, Japan  
SO Gastroenterol. Jpn. (1990), 25(6), 720-6  
CODEN: GAJABC; ISSN: 0435-1339  
DT Journal  
LA English

L12 ANSWER 9 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB The effectiveness of continuous arterial infusion of protease inhibitor on

acute exptl. pancreatitis was investigated. Acute hemorrhagic pancreatitis was induced by closed duodenal loop obstruction using mongrel

dogs. The obstruction was released at 16 h, and dogs were divided into three groups; Group I: non-treated control, Group II: nafamostat mesilate (FUT-175) was given i.v. (5 .mu.g/kg/min), Group III: FUT-175 was

admitted via celiac artery. At 24 h, the concn. of FUT-175 in the pancreatic tissues in group II and III were 905 and 4453 ng/g, resp. The trypsin like activities in the pancreatic tissues in group I, II and III were 2.1, 1.4 and 0.7 nmol/min/mg protein, and the extent of necrosis of pancreatic parenchyma in each group were 49.5, 25.6 and 12.4%, resp. Serum calcium, amylase and lipase levels were significantly improved in group III. These results suggest that continuous arterial infusion of protease inhibitor markedly decreases the extent of pancreatic necrosis

in severe acute pancreatitis.

AN 1990:624417 CAPLUS

DN 113:224417

TI Effect of continuous arterial infusion of protease inhibitor on experimental acute pancreatitis induced by closed duodenal loop obstruction

AU Kakugawa, Yoichiro; Takeda, Kazunori; Sunamura, Makoto; Kawaguchi, Shinya;

Kobari, Masao; Matsuno, Seiki

CS Sch. Med., Tohoku Univ., Sendai, Japan

SO Nippon Shokakibyo Gakkai Zasshi (1990), 87(6), 1444-50

CODEN: NIPAA4; ISSN: 0369-4259

DT Journal

LA Japanese

L12 ANSWER 10 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB To confirm that trypsin activity is a most important indicating factor in closed duodenal loop pancreatitis in rats, the course of acute pancreatitis was obsd. when trypsinogen activation was inhibited by intraduodenal infusion of a potent synthetic trypsin inhibitor (TI, nafamostat mesilate) but the other conditions were left unchanged. Intraduodenal and intrapancreatic trypsinogen activation was inhibited

for 16 h after the intraduodenal infusion of the inhibitor, although elevation

of serum amylase and immunoreactive trypsin and pancreatic trypsinogen remained similar both in the TI and control groups. The mortality decreased from 44% (control) to 4% (TI) at 48 h after establishing the model. Active trypsin in duodenal reflux is an initiating factor for further development of acute pancreatitis in the closed loop model, and inhibition of the initial activation of trypsinogen has a favorable

effect

on acute pancreatitis even if other deleterious factors remain unchanged.

AN 1990:509072 CAPLUS

DN 113:109072

TI Prevention of experimental acute pancreatitis by intraduodenal trypsin inhibitor in rat

AU Ono, Hideki; Hayakawa, Tetsuo; Kondo, Takaharu; Shibata, Tokimune;

Kitagawa, Motoji; Sakai, Yuzo; Kiriya, Seiki; Tajima, Hiroshi  
CS Sch. Med., Nagoya Univ., Nagoya, 466, Japan  
SO Dig. Dis. Sci. (1990), 35(6), 787-92  
CODEN: DDSCDJ; ISSN: 0163-2116  
DT Journal  
LA English

L12 ANSWER 11 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB OKY-046 at 30-100 mg/kg intraduodenally (i.d.) and at 1-30 mg/kg (i.v.) inhibited bronchoconstriction in a dose-dependent manner after Forssman antigen injection. Aspirin (3 mg/kg, i.v.) also suppressed bronchoconstriction. OKY-046 (30-100 mg/kg, i.d.) suppressed the increase in TXB2 in plasma in a dose-dependent manner. However, there was no effect of OKY-046 and aspirin on the decrease in complement activity (CH50), platelets, or leukocytes. Addnl., OKY-046 (300 mg/kg, p.o.) prolonged the survival time following Forssman antigen injection. However, the immune hemolysis reaction was not prevented by OKY-046 (10-6-10-3 M). FUT-175 protected against the Forssman shock at 1 mg/kg, i.v. and the in vitro immune hemolysis reaction at 10-5 M.

OKY-046 (300 mg/kg orally) suppressed the direct passive Arthus reaction and immune complex nephritis in rats. There was no effect of OKY-046 on the delayed-type hypersensitivity response to picryl chloride in mice. OKY-046 can be a beneficial drug for the treatment of types II and III allergic reactions.

AN 1990:210724 CAPLUS

DN 112:210724

TI Anti-allergic effects of (E)-3-[p-(1H-imidazol-1-ylmethyl)phenyl]-2-propenoic acid (OKY-046), a specific thromboxane (TX)A2 synthetase inhibitor. (II) Effect on type II-IV allergic reactions

AU Kikuchi, Shinji; Takehana, Yasuo; Hamano, Shuichiro; Ichikawa, Kiyoshi; Komatsu, Hidetada; Okegawa, Tadao; Ikeda, Shigeru

CS Res. Lab., Kissei Pharma. Co., Ltd., Matsumoto, 399, Japan

SO Nippon Yakurigaku Zasshi (1990), 95(3), 131-7

CODEN: NYKZAU; ISSN: 0015-5691

DT Journal

LA Japanese

L12 ANSWER 12 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB The inhibitory effect of Anthrobin P (I) on various enzymes in comparison with aprotinin, nafamostat mesilate and gabexate mesilate were studied in vitro. In the presence of heparin, the inhibitory effect of I on thrombin

was increased approx. 36 times and that on factor Xa was increased 38 times, while the aprotinin effect on either enzyme was not increased.

The

combination of I with heparin was more effective than those of nafamostat mesilate and gabexate mesilate. Its thrombin-inhibitory effect was approx. 6700 times stronger than that of gabexate mesilate and 40 times stronger than that of nafamostat mesilate. Its inhibitory effect on factor Xa was approx. 540 times stronger than that of gabexate mesilate and 4.8 times stronger than that of nafamostat mesilate. I and aprotinin did not inhibit activated protein C but both nafamostat mesilate and gabexate mesilate inhibited it with nafamostat mesilate being about 10 times more potent than gabexate mesilate. All the test substances inhibited plasmin but only gabexate mesilate and nafamostat mesilate inhibited urokinase. I did not inhibit kallikrein, while aprotinin was 69,000 times more potent than gabexate and 160 times more potent than nafamostat mesilate. Thus, I showed not only potent inhibitory effects

on

thrombin and factor Xa, but also a selectivity in the coagulation cascade.

I did not inhibit the activity of protein C, which plays an important role

in the anticoagulant system, while the other test substances did. The

results obtained here and the report about the effect of protein C on disseminated intravascular coagulation DIC suggest that I may be a favorable therapeutic drug against DIC.

AN 1990:132150 CAPLUS  
DN 112:132150  
TI Inhibitory effect of Anthrobin P on various proteinases  
AU Abiko, Yumiko; Ohtsubo, Masayuki; Hirahara, Keizo; Matsuishi, Tetsuro  
CS Pharma Res. Lab., Hoechst Japan Ltd., Japan  
SO Yakuri to Chiryo (1989), 17(12), 5843-9  
CODEN: YACHDS; ISSN: 0386-3603  
DT Journal  
LA Japanese

L12 ANSWER 13 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB The effect of ONO-3307 (4-sulfamoylphenyl-4-guanidinobenzoate methanesulfonate, a new protease inhibitor, was studied on various proteases in vitro and in an exptl. thrombosis model in vivo. ONO-3307 competitively inhibited trypsin, thrombin, plasma kallikrein, plasmin, pancreatic kallikrein and chymotrypsin; the  $K_i$  values were 0.048  $\mu$ M, 0.18  $\mu$ M, 0.29  $\mu$ M, 0.31  $\mu$ M, 3.6  $\mu$ M and 47  $\mu$ M, resp. In addn., ONO-3307 inhibited both elastase release from N-formyl-Met-Leu-Phe (fMLP)-stimulated leukocytes and tissue thromboplastin release from endotoxin-stimulated leukocytes. To examine the effects of ONO-3307 on disseminated intravascular coagulation (DIC), an exptl. thrombosis model was developed. ONO-3307 (10 mg/kg/h) completely inhibited the deposition of radioactive fibrin in kidney and lung. Gabexate mesilate (50 mg/kg/h) was also effective in this model, but the effect of nafamostat mesilate was uncertain. These results indicate that ONO-3307 exhibits a wide

range of inhibitory effects on various proteases, and ONO-3307 may be useful for the treatment of protease-mediated diseases such as thrombosis and DIC.

AN 1990:30412 CAPLUS  
DN 112:30412  
TI Inhibitory effects of ONO-3307 on various proteases and tissue thromboplastin in vitro and on experimental thrombosis in vivo  
AU Matsuoka, Syozo; Futagami, Mayumi; Ohno, Hiroyuki; Imaki, Katsuhiko; Okegawa, Tadao; Kawasaki, Akiyoshi  
CS Minase Res. Inst., Ono Pharm. Co., Ltd., Osaka, 618, Japan  
SO Jpn. J. Pharmacol. (1989), 51(4), 455-63  
CODEN: JJPAAZ; ISSN: 0021-5198  
DT Journal  
LA English

L12 ANSWER 14 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB In dogs with exptl. pancreatitis, administration of the synthetic protease inhibitor nafamostat mesilate (5  $\mu$ g/kg/min) markedly decreased the extent of pancreatic necrosis.

AN 1989:526779 CAPLUS  
DN 111:126779  
TI Effect of continuous arterial infusion of protease inhibitor on experimental acute pancreatitis  
AU Kakugawa, Yoichiro; Takeda, Kazunori; Kobari, Masao; Matsuno, Seiki  
CS Sch. Med., Tohoku Univ., Sendai, 980, Japan  
SO Gastroenterol. Jpn. (1989), 24(4), 448  
CODEN: GAJABC; ISSN: 0435-1339  
DT Journal  
LA English

L12 ANSWER 15 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB Recently, nontoxic synthesized low mol. wt. proteinase inhibitors have been clin. available for the treatment of disseminated intravascular coagulation and pancreatitis. To det. if these drugs are useful aids to treat patients with pemphigus, the authors examd.

the effect of . . . ga.-guanidino ester analogs, i . . . , gabexate mesylate, camostat mesylate, and nafamostat mesylate, on exptl. pemphigus acantholysis in both organ culture and neonatal BALB/c mice.

Furthermore,

the effect of plasma natural proteinase inhibitors (.alpha.1-proteinase inhibitor) isolated from human plasma was examd. Results revealed that low-mol. wt. inhibitors (drugs) were able to inhibit the induction of acantholysis in organ culture system, but had little or no effect on lesion formation in the neonatal mouse system. By contrast, .alpha.1-proteinase inhibitor could completely inhibit acantholysis formation in mice. These findings implied a possible new therapeutic approach using proteinase inhibitors for patients with pemphigus.

AN 1989:509005 CAPLUS

DN 111:109005

TI Proteinase inhibitors block formation of pemphigus acantholysis in experimental models of neonatal mice and skin explants: effects of synthetic and plasma proteinase inhibitors on pemphigus acantholysis

AU Naito, Katsuichi; Morioka, Shinji; Nakajima, Sumino; Ogawa, Hideoki

CS Sch. Med., Juntendo Univ., Tokyo, 113, Japan

SO J. Invest. Dermatol. (1989), 93(1), 173-7

CODEN: JIDEAE; ISSN: 0022-202X

DT Journal

LA English

L12 ANSWER 16 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB The authors examd. the ability of highly potent synthetic protease inhibitor, nafamostat mesilate (FUT-175), to protect the rat pancreas against acute pancreatitis (AP) induced by a supramaximal dose of caerulein (CR). Rats received a 6-h, continuous i.v. infusion of either CR alone or CR + a 6-h infusion of either 2.5, 5.0, 10.0, 25.0, or 50.0

mg

of FUT-175/kg/h. Pancreas wts. and serum chymotrypsinogen concns. were significantly elevated by .apprx.85 and 75%, resp., over values in saline infused rats. Pancreas wts. in rats **treated** with CR + FUT-175 at doses from 2.5-25.0 mg/kg/h were significantly reduced by .apprx.20% compared to rats given CR alone, and histol. showed a redn. in the extent and size of acinar cell vacuolization and reduced interstitial edema compared to rats **treated** with CR alone. Serum chymotrypsinogen concns. in rats **treated** with CR and either 5.0 or 10.0 mg of FUT-175 kg/h were significantly lower than in rats given CR alone. Significant mortality occurred in rats infused with FUT-175 at doses of either 25.0 or 50.0 mg of FUT-175/kg/h. These data indicate that serine proteases appear to be involved in the pathogenesis of CR induced AP in rats and that FUT-175 administered in low doses (2.5-10.0 mg/kg/h) provides significant protection against this form of pancreatitis.

AN 1989:470920 CAPLUS

DN 111:70920

TI The effects of nafamostat mesilate (FUT-175) on caerulein-induced acute pancreatitis in the rat

AU Wisner, James R., Jr.; Ozawa, Susumu; Renner, Ian G.

CS Sch. Med., Univ. South. California, Los Angeles, CA, 90033, USA

SO Int. J. Pancreatol. (1989), 4(4), 383-90

CODEN: IJPNEX; ISSN: 0169-4197

DT Journal

LA English

L12 ANSWER 17 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB The protease inhibitors, gabexate mesylate, nafamostat mesylate, and urinastatin (urinary trypsin inhibitor), had a protective effect against endotoxin-induced exptl. disseminated intravascular coagulation (DIC) in rats. This protective effect was noted in rats **treated with** 10, or 100 mg gabexate mesylate/kg, 0.01 or 0.1 mg nafamostat mesylate/kg, and 5,000 U urinastatin/kg in the following parameters; fibrinogen and fibrin degrdn. products, fibrinogen level, prothrobmin time, partial thromboplastin time, platelet counts, and the no. of renal glomeruli with fibrin thrombi. Thus, protease inhibitors, may be useful for the



**treatment of DI**

AN 1989:88224 CAPLUS  
 DN 110:88224  
 TI Effect of protease inhibitors on endotoxin-induced disseminated intravascular coagulation in rats  
 AU Murakami, Masashi  
 CS 1st Dep. Med., Kyoto Prefect. Univ. Med., Kyoto, Japan  
 SO Kyoto-furitsu Ika Daigaku Zasshi (1988), 97(9), 1155-65  
 CODEN: KFIZAO; ISSN: 0023-6012  
 DT Journal  
 LA English

L12 ANSWER 18 OF 28 CAPLUS COPYRIGHT 2000 ACS  
 AB The **preventive** action of the new low-mol.-wt. protease inhibitor FUT-175 against acute exptl. **pancreatitis** (AEP) was studied in dogs. At 30 min after induction of AEP, the sensitivity of blood platelets to ADP-induced aggregation was increased >2 times in untreated animals. An evident decrease in platelet count of .apprx.37% was noted in these dogs at 6 h after AEP induction. **Treatment** of AEP with FUT-175 **prevented** these changes. Apparently, the pos. effect of FUT-175 against AEP depends at least in part on its influence on platelet aggregation.

AN 1988:522465 CAPLUS  
 DN 109:122465  
 TI Effect of FUT-175 (nafamstat mesylate) on platelets in canine acute experimental pancreatitis  
 AU Gabryelewicz, A.; Prokopowicz, J.; Bodzenta, A.; Bielecki, W.; Rydzewska, G.  
 CS Dep. Gastroenterol., Med. Acad., Bialystok, 15-276, Pol.  
 SO Digestion (1988), 40(1), 19-24  
 CODEN: DIGEBW; ISSN: 0012-2823  
 DT Journal  
 LA English

L12 ANSWER 19 OF 28 CAPLUS COPYRIGHT 2000 ACS  
 AB A review, with 9 refs., of the structure, side effects, and pharmacol. of 3 new trypsin inhibitors, gabexate mesilate, **camostat** mesilate, and nafamostat mesilate, for the **treatment** of pancreatitis.

AN 1988:400030 CAPLUS  
 DN 109:30  
 TI New drugs for pancreatitis  
 AU Takeuchi, Tadashi; Shimizu, Kyoko  
 CS Tokyo Women's Med. Coll., Tokyo, Japan  
 SO Pharma Med. (1988), 6(1), 83-6  
 CODEN: PMEDEC; ISSN: 0289-5803  
 DT Journal; General Review  
 LA Japanese

L12 ANSWER 20 OF 28 CAPLUS COPYRIGHT 2000 ACS  
 AB In rat plasma, FUT-175 exhibited a dose-dependent anticoagulant effect as detd. by its ability to prolong the activated partial thromboplastin time.  
 Also, I had **beneficial effects in exptl. endotoxin-induced exptl. disseminated intravascular coagulation** as shown by its effect in activated partial thromboplastin time and prothrombin time, the fibrinogen and complement levels, platelet counts and fibrin degrdn. products.

AN 1988:49032 CAPLUS  
 DN 108:49032  
 TI The effects of FUT-175 (nafamostat mesilate) on blood coagulation and experimental disseminated intravascular coagulation  
 AU Koshiyama, Yoshiko; Kobori, Akemi; Ogiwara, Madoka; Yokomoto, Yasuki; Ohtani, Kyoko; Shimamura, Kazunori; Iwaki, Masahiro  
 CS Res. Lab., Torii Co., Ltd., Ichikawa, 272, Japan  
 SO Nippon Yakurigaku Zasshi (1987), 90(6), 313-20  
 CODEN: NYKZAU; ISSN: 0015-5691

DT Journal  
LA Japanese

L12 ANSWER 21 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB To study the role of thromboxane A2 (TxA2) [57576-52-0] in Forssman systemic shock (FSS) in guinea pigs, the effect of

(E)-3-[p-(1-H-imidazol-1-ylmethyl)phenyl]-2-propenoic acid hydrochloride (OKY-046) [78712-43-3],

a specific TxA2 synthetase [60832-04-4] inhibitor, was studied. OKY-046 administered i.v. clearly prolonged survival time and protected against fatal shock. In shocked animals, definite decreases in serum complement hemolytic activity (CH50), leukocyte and platelet counts, and an increase in lactate dehydrogenase activity were obsd. In addn., an increase of TXB2 and incoagulability of blood were obsd. after shock. Whereas

OKY-046

had no effect on the decrease in CH50 or platelet and leukocyte counts, it

inhibited the increase of TXB2 and increased the amt. of 6-keto PGF1.alpha. [58962-34-8]. When Forssman antibody (half an LD) was injected, a diphasic increase in airway resistance was obsd. OKY-046 inhibited this diphasic increase in airway resistance. These data

suggest

a pathophysiol. role for TxA2 in FSS. OKY-046 inhibited the Forssman antibody induced respiratory **disorders** probably due to the inhibition of TxA2 synthesis after shock.

AN 1987:168772 CAPLUS

DN 106:168772

TI Role of thromboxane (Tx) A2 in guinea pig Forssman shock and the effect of

OKY-046, a Ts A2 synthetase inhibitor

AU Nagai, Hiroichi; Yakuo, Ikuhisa; Inagaki, Naoki; Koda, Akihide; Hamano, Shuichiro; Ujiie, Arao; Nakazawa, Masayuki

CS Dep. Pharmacol., Gifu Pharm. Univ., Gifu, 502, Japan

SO Prostaglandins, Leukotrienes Med. (1987), 26(2), 133-41

CODEN: PLMEDD; ISSN: 0262-1746

DT Journal

LA English

L12 ANSWER 22 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB The effects of FUT-175 (I) [82956-11-4] on acute pancreatitis were evaluated in dogs. Models of acute pancreatitis were prepd. by the injection of 25% deoxycholic acid into pancreatic duct. The group without

FUT-175 had a mortality of 64% at 24 h after pancreatitis onset, but the group with FUT-175 administration had 50%. FUT-175 had no effect on the levels of serum amylase, trypsin inhibitor capacity, and complement titer.

However, FUT-175 inhibited the increase of serum trypsin [9002-07-7] levels. When trypsin (16 mg/kg) was i.v. injected, blood pressure and trypsin inhibitor capacity in the dogs were immediately decreased, and levels of serum kallikrein were increased. All dogs died within 15 min. In the group given FUT-175 before trypsin injection, improvement of blood pressure and trypsin inhibition capacity were obsd., and levels of serum kallikrein were not increased. Administration of FUT-175 may be effective

in acute pancreatitis.

AN 1986:491300 CAPLUS

DN 105:91300

TI Effects of FUT-175 on experimental acute pancreatitis and on trypsin-injected dogs

AU Tanaka, Tatsuhiko; Yamamoto, Masahiro; Okumura, Shuuichi; Kasiwagi, Ryouichi; Oyanagi, Harumasa; Saitoh, Yoichi

CS Sch. Med., Kobe Univ., Kobe, Japan

SO Yakuri to Chiryo (1986), 14(4), 2241-7

CODEN: YACHDS; ISSN: 0386-3603

DT Journal  
LA Japanese

L12 ANSWER 23 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB In dogs during 300-min recovery from a circulatory arrest, the improvement of disseminated intravascular coagulation (DIC) in gabexate mesilate (FOY)

[56974-61-9]-and Nafamstat mesilate (FUT 175) [82956-11-4]-**treated** groups was better than that in a heparin [9005-49-6]-**treated** group. A decrease in platelet counts and antithrombin III (AT-III) concns in the blood seen in the controls was cor. by heparin but the increased concns. of fibrin degrading product (FDP) were unchanged in the heparin-**treated** group. Prothrombin time, activated partial prothrombin time (APTT) and FDP levels remained within normal limits in the FOY-**treated** group and no decrease in either platelet count or AT-III concns. was obsd. In the FUT 175-**treated** group, prolongation of APTT, no decrease in the platelet count and AT-III concns., and normal FDP levels were obsd. The results indicated the importance of early **treatment** for DIC.

AN 1986:61730 CAPLUS

DN 104:61730

TI Studies on the effects of primary therapy for DIC following circulatory arrest

AU Tanaka, Shigeru; Takemoto, Yoshinobu; Nakamura, Yoshihiro; Kohama, Akitsugu

CS Dep. Emerg. Med., Kawasaki Med. Sch., Japan

SO Kawasaki Igakkaishi (1984), 10(4), 501-5

CODEN: KAIGD3; ISSN: 0386-5924

DT Journal

LA Japanese

L12 ANSWER 24 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB The effects of FUT-175 (nafamstat mesilate) (I) [82956-11-4], a potent proteinase [9001-92-7] inhibitor, on acute pancreatitis (serum levels of pancreatic enzymes and histol. changes of various organs) were compared in 2 groups of dogs with exptl. acute pancreatitis induced by sodium deoxycholate. During const. i.v. infusion of 10  $\mu$ g/kg/h of I for 3 h, the serum concn. of the drug remained high, whereas the elevated trypsin-like activity in serum of the pancreatitis dogs was decrease, suggesting proteinase inhibition. Levels of the other pancreatic enzymes in serum of the pancreatitis dogs decreased slightly in the I-**treated** group. Furthermore, histol. changes of the pancreas were less in I-**treated** dogs, whereas the other organs including lung and kidney did not show any difference in their histol. pictures. Pancreatic enzymes were seen in ascites, 12.aprx.24 h after induction of exptl. acute pancreatitis, and levels were markedly higher than the serum levels in the same individuals; these levels were not suppressed by the i.v. infusion of I. Apparently, the progress of acute inflammatory changes of the pancreas can be protected by I administration, and it may be possible that the **treatment** of multiple organ failure (thought to be caused by various enzymes) and the **treatment** for ascites accumulation or ascitic enzymes is necessary in moderate or severe

acute pancreatitis.

AN 1985:572036 CAPLUS

DN 103:172036

TI Efficacy of a proteinase inhibitor on experimental acute pancreatitis in dogs

AU Taguchi, Susumu; Usui, Mitsuro; Nagumo, Akihiko; Funatomi, Hitoshi; Hattai,

Yoshio

CS Sch. Med., Showa Univ., Tokyo, Japan

SO Yakuri to Chiryō (1985), 13(6), 3367-76

CODEN: YACHDS; ISSN: 0386-3603

DT Journal

LA Japanese

L12 ANSWER 25 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB FUT-175 (I) [82956-11-4], a new synthetic protease [9001-92-7] inhibitor, was administered to (NZB .times. NZB)F1 mice in order to examine its influence on the development of autoimmune diseases. I has both prophylactic and curative effects on the development of lupus nephritis: the I **treated** mice showed a low percentage of proteinuria, a marked decrease in blood urea N levels, and low glomerular damages. Dexamethasone [50-02-2] had almost the same effect as I, but

it

was slightly less effective than I. These results suggest that the administration of I may become a viable strategy for the **treatment** of human autoimmune diseases.

AN 1985:571628 CAPLUS

DN 103:171628

TI Effect of FUT-175, a new synthetic protease inhibitor, on the development of lupus nephritis in (NZB .times. NZW) F1 mice

AU Ikehara, S.; Shimamura, K.; Aoyama, T.; Fujii, S.; Hamashima, Y.

CS Fac. Med., Kyoto Univ., Kyoto, 606, Japan

SO Immunology (1985), 55(4), 595-600

CODEN: IMMUAM; ISSN: 0019-2805

DT Journal

LA English

L12 ANSWER 26 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB In the acute serum sickness model in rabbits, platelet release of 5-HT [50-67-9], platelet surface Igs, and platelet aggregation in response to ADP [58-64-0], together with the effect of dipyridamole [58-32-2] and the complement C1r [80295-34-7] antagonist FUT-175 [82956-11-4] was examd. The immune release of 5-HT from platelets occurred between

4

and 6 days after injection of bovine serum albumin (BSA), before immune elimination and proteinuria, but coincident with the appearance of immune complexed BSA in the circulation. Nevertheless, platelet turnovers were not accelerated. **Treatment** with dipyridamole 50 mg/kg/24 h **prevented** the release of 5-HT and inhibited proteinuria, glomerular hypercellularity and immune complexes in the glomeruli. Using the C1r antagonist FUT-175, similar abrogation of the disease was obtained. Thus, in the nephritis of acute serum sickness in rabbits,

some

of the immune release from platelets may be the result of immune complex binding to the platelet, perhaps through the receptor for complement C3b [80295-43-8].

AN 1985:553616 CAPLUS

DN 103:153616

TI Platelet involvement in the nephritis of acute serum sickness in rabbits: protection by dipyridamole and FUT-175

AU Koyama, A.; Inage, H.; Sano, M.; Narita, M.; Tojo, S.; Neild, G. H.; Cameron, J. S.

CS Inst. Clin. Med., Univ. Tsukuba, 30305, Japan

SO Clin. Exp. Immunol. (1985), 61(2), 388-96

CODEN: CEXIAL; ISSN: 0009-9104

DT Journal

LA English

L12 ANSWER 27 OF 28 CAPLUS COPYRIGHT 2000 ACS

AB Ascitic fluid from dogs with hemorrhagic pancreatitis induced by intraductal injection of trypsin and autologous bile contained high concns. of trypsin, esterase, bradykinin, histamine, and prostaglandin E. When this ascitic fluid was injected i.p. into mice in doses of 2 and 3 mL, the mortality rate 72 h after injection was 66.0 and 88.4%, resp. When nafamstat mesilate (a synthetic antiprotease) was mixed with the ascitic fluid before injection, trypsin was not detected, and bradykinin and esterase were decreased considerably. The mortality rate for this mixt. at 2 and 3 mL injections was 26.7 and 80.6%, resp. Bradykinin,

trypsin, and escape of ascitic fluid may be partly responsible for the high mortality rate obsd. in pancreatitis. Peritoneal lavage solns. with nafamstat mesilate may be effective in hemorrhagic pancreatitis therapy.

AN 1985:502878 CAPLUS  
DN 103:102878  
TI Toxic products in hemorrhagic ascitic fluid generated during experimental acute hemorrhagic pancreatitis in dogs and a **treatment** which reduces their effect  
AU Satake, Katsusuke; Koh, Ichikun; Nishiwaki, Hidiki; Umeyama, Kaoru  
CS Med. Sch., Osaka City Univ., Osaka, 545, Japan  
SO Digestion (1985), 32(2), 99-105  
CODEN: DIGEBW; ISSN: 0012-2823  
DT Journal  
LA English

L12 ANSWER 28 OF 28 CAPLUS COPYRIGHT 2000 ACS  
AB The effect of ~~FUT-175 (I)~~ [82956-11-4] on various models of exptl. acute pancreatitis were examd. FUT-175 infused i.v. in a dose range of 5-50 .mu.g/kg/min inhibited the increase in plasma trypsin activity and reduced the mortality of rabbits in trypsin-induced acute pancreatitis in a dose-dependent manner. Increases in serum amylase activity and pancreatic tissue lesions were attenuated by FUT-175. FUT-175 infused i.v. in a dose range of 1-50 .mu.g/kg/min decreased the mortality of rats in exptl. acute pancreatitis produced by trypsin and endotoxin. FUT-175 infused i.v. at a dose range 1-100 .mu.g/kg/min protected the dogs from the increase in plasma trypsin activity and hypotension and shock induced by trypsin.

AN 1984:622249 CAPLUS  
DN 101:222249  
TI Pharmacological studies of FUT-175, nafamstat mesylate. II. Effects on experimental acute pancreatitis  
AU Iwaki, Masahiro; Ozeki, Masayuki; Sato, Takuo; Suzuki, Kunihiro;  
Motoyoshi, Akemi; Suzuki, Shoshi; Fujita, Mitsunobu; Aoyama, Takuo  
CS Res. Lab., Torii and Co., Ltd., Ichikawa, 272, Japan  
SO Nippon Yakurigaku Zasshi (1984), 84(4), 363-72  
CODEN: NYKZAU; ISSN: 0015-5691  
DT Journal  
LA Japanese

=> s ?myocardial? or ?infarction?

L13 228126 ?MYCARDIAL? OR ?INFARCTION?

=> s l1 and l13

L14 4 L1 AND L13

=> d 1-4 ab,bib

L14 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2000 ACS  
AB Diagnostic methods that rely on the use of one or more assays that assess cellular activation are provided. The assays are performed on whole blood or leukocytes (neutrophils), and indicate individually or in combination the level of cardiovascular cell activation, which is pivotal in many chronic and acute disease states. These results of the assays are used within a clin. framework to support therapeutic decisions such as:  
further testing for infectious agents, anti-oxidant or anti-adhesion therapy, postponement and optimal re-scheduling of high-risk surgeries,  
classifying susceptibility to and progression rates of chronic disease such as diabetes, organ rejection, atherogenesis, and venous insufficiency; extreme interventions in trauma cases of particularly high risk and

activation-lowering therapies. Also provided is a compn. derived from a pancreatic homogenate that contains circulating cell activating factors, which can serve as targets for drug screening to identify drug candidates for use in activation lowering therapies. Methods for lowering cell activation by administering protease inhibitors, particularly serine protease inhibitors, are also provided. Kits for performing the methods are also provided.

AN 1999:595348 CAPLUS

DN 131:225828

TI Methods of diagnosis and triage using cell activation measures

IN Stoughton, Roland B.; Schmid-Schonbein, Geert W.; Hugli, Tony E.;

Kistler,  
Erik

PA Cell Activation, Inc., USA; The Regents of the University of California;  
The Scripps Research Institute

SO PCT Int. Appl., 184 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9946367	A2	19990916	WO 1999-US5247	19990311
	WO 9946367	A3	19991209		

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9931829	A1	19990927	AU 1999-31829	19990311
PRAI US 1998-38894		19980311		
WO 1999-US5247		19990311		

L14 ANSWER 2 OF 4 USPATFULL

AB The present invention is directed to thrombo-resistant coatings for use with gas permeable biomedical devices and implants. The coatings

include

a siloxane surface onto which a plurality of amine functional groups have been bonded. Covalently bonded to the amine functional groups are

a

plurality of poly(ethylene oxide) chains, such that a single poly(ethylene oxide) chain is bonded to a single amine functional

group.

A quantity of at least one bioactive molecule designed to counteract a specific blood-material incompatibility reaction is covalently bonded

to

the poly(ethylene oxide) chains, such that a single bioactive molecule is coupled to a single polyethylene oxide chain.

The methods of manufacturing the present invention include preparing a material having a siloxane surface onto which a plurality of amine functional groups have been bonded. This is preferably achieved by plasma etching with ammonia gas. The amine-containing siloxane surface is reacted with poly(ethylene oxide) chains terminated with functional groups capable of reacting with the amine groups on the siloxane surface. The material is then reacted with a solution of at least one bioactive molecule which counteracts a blood-material incompatibility reaction, such that a single bioactive molecule is coupled to a single poly(ethylene oxide) chain. The resulting siloxane surface is capable

of

resisting blood-material incompatibility reactions while maintaining high gas permeability.

AN 94:71052 USP JLL  
TI Gas permeable thrombo-resistant coatings and methods of manufacture  
IN Winters, Suzanne, Salt Lake City, UT, United States  
Solen, Kenneth A., Orem, UT, United States  
Sanders, Clifton G., Salt Lake City, UT, United States  
Mortensen, JD, Sandy, UT, United States  
Berry, Gaylord, Salt Lake City, UT, United States  
PA Cardiopulmonics, Inc., Salt Lake City, UT, United States (U.S.  
corporation)  
PI US 5338770 19940816  
AI US 1990-509063 19900412 (7)  
DCD 20101116  
RLI Continuation-in-part of Ser. No. US 1988-215014, filed on 5 Jul 1988,  
now patented, Pat. No. US 5262451 which is a continuation-in-part of  
Ser. No. US 1988-204115, filed on 8 Jun 1988, now patented, Pat. No. US  
4850958  
DT Utility  
EXNAM Primary Examiner: Szekely, Peter  
LREP Workman Nydegger Jensen  
CLMN Number of Claims: 33  
ECL Exemplary Claim: 1  
DRWN No Drawings  
LN.CNT 1122  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 3 OF 4 BIOSIS COPYRIGHT 2000 BIOSIS

AB Background: Reperfusion injury in the myocardium has recently been  
considered to be a type of inflammation, and close attention has been  
paid

to the possible involvement of neutrophils, complement, and cytokines in  
the onset of this injury. Recently, it has been reported that serum  
levels

of interleukin-6 are elevated significantly after myocardial  
**infarction**. The major site of interleukin-6 production and its  
exact roles are still unknown. In this study, we hypothesized that  
myocytes may produce interleukin-6 during hypoxia and this may play a  
role

in neutrophil-mediated reperfusion injury. Methods and results: In the  
clinical study, 20 patients who underwent coronary artery bypass grafting  
were divided into 2 groups: group F, in which patients were treated with  
a

serine protease inhibitor (FUT-175, 2 mg/kg per hour) during  
cardiopulmonary bypass, and group C (untreated patients). In group C,  
myocardial interleukin-6 production, as determined by the difference  
between the interleukin-6 level in the cardiopulmonary bypass circuit and  
its level in coronary venous blood, increased significantly after  
reperfusion (12  $\pm$  4 pg/mL) as compared with that before aortic  
crossclamping (2  $\pm$  2 pg/mL). In group F, the increase in the  
interleukin-6 level was suppressed significantly (before aortic  
crossclamping, 3  $\pm$  2 pg/mL; after reperfusion, 4  $\pm$  3 pg/mL). The  
interleukin-6 production differed significantly between group C and group  
F. In the in vitro experimental study, the supernatant from myocytes  
exposed to 2 hours of hypoxia (group 2H) showed significantly higher  
levels of interleukin-6 (455  $\pm$  260 pg/mL) than that from normoxic  
myocytes (group N) (47  $\pm$  15 pg/mL). This interleukin-6 production was  
suppressed by the addition of FUT-175 (123  $\pm$  24 pg/mL). The

interleukin-6

production by endothelial cells of coronary vessels did not differ  
between

group 2H (283  $\pm$  151 pg/mL) and group N (151  $\pm$  86 pg/mL). In a  
coincubation system with a monolayer of endothelial cells on collagen  
membrane and myocytes under collagen membrane in a modified Boyden  
chamber, 2 hours of coincubation showed a significantly higher percent of  
neutrophil transendothelial migration (group 2H vs N, 78%  $\pm$  13% vs 26%

+-

11%), value of chemiluminescence (22  $\pm$  8 vs 5  $\pm$  2 X 10<sup>3</sup> counts/3

minutes), and percent of irreversibly damaged myocytes (48% +/- 17% vs 12% +/- 8%) than normoxic incubation. In contrast, anti-interleukin-6 monoclonal antibody significantly attenuated neutrophil transendothelial migration (42% +/- 19%) and irreversible damage of myocytes (26% +/- 15%)

in

2 hours of coincubation. Conclusions: Interleukin-6 is produced from myocardium during ischemia and reperfusion in patients undergoing

coronary

bypass grafting. This interleukin-6 may be derived from hypoxic myocytes and play a role in neutrophil-mediated reperfusion injury in myocardium.

AN 1998:475040 BIOSIS

DN PREV199800475040

TI Interleukin-6 derived from hypoxic myocytes promotes neutrophil-mediated reperfusion injury in myocardium.

AU Sawa, Yoshiki (1); Ichikawa, Hajime; Kagisaki, Koji; Ohata, Toshihiro; Matsuda, Hikaru

CS (1) First Dep. Surg., Osaka Univ. Med. Sch., 2-2 Yamada-oka, Suita, Osaka 565 Japan

SO Journal of Thoracic and Cardiovascular Surgery, (Sept., 1998) Vol. 116, No. 3, pp. 511-517.

ISSN: 0022-5223.

DT Article

LA English

L14 ANSWER 4 OF 4 BIOSIS COPYRIGHT 2000 BIOSIS

AB The therapeutic effect of the synthetic serine protease inhibitor, FUT-175, on cerebral vasospasm after subarachnoid hemorrhage (SAH) was investigated. Twenty-three patients with severe SAH who were admitted between February and July 1990 and who underwent surgery within 48 hours

of

the initial aneurysmal rupture were treated with an intravenous administration of FUT-175 soon after the operation. The patients were divided randomly into three groups, each receiving a different dose of FUT-175 (Group A, 20 mg every 12 hours for 4 days; Group B, 20 mg every 6 hours for 4 days; Group C, 40 mg every 6 hours for 4 days). The results were compared with another group of twenty-two patients with severe SAH who were admitted before February 1990 and received equivalent treatment, except they were not treated with FUT-175. In 64% of all the patients treated with FUT-175 (Groups A, B, C), and in 85% of those treated with higher doses of FUT-175 (Groups B and C), there was no spasm or only mild vasospasm on the angiogram. The incidence of a delayed ischemic neurological deficit significantly decreased from 55% in the control

group

to 13% in all patients treated with FUT-175 and to 7% in the patients treated with higher doses ( $P < 0.05$ ). The incidence of cerebral infarction resulting from vasospasm significantly decreased from 43% in the control group to 9% in patients treated with FUT-175. In the patients treated with higher doses of FUT-175 (Groups B and C), none developed cerebral infarction. The outcome 1 month after SAH also significantly improved in patients treated with FUT-175. The

patients

with a good outcome accounted for 67% of the patients treated with FUT-175, as compared with 35% in the control group. The patients with a poor outcome accounted for only 9% of patients treated with FUT-175, as compared with 36% in the control group. These figures were much more satisfactory in the patients treated with higher doses of FUT-175, i.e., 71% of the patients had a good outcome and none had a poor outcome. FUT-175 is a promising drug for preventing cerebral vasospasm and delayed ischemic neurological deficit after SAH. Additional controlled studies

with

larger numbers of patients are necessary.

AN 1992:215286 BIOSIS

DN BA93:115511

TI THERAPEUTIC TRIAL OF CEREBRAL VASOSPASM WITH THE SERINE PROTEASE INHIBITOR

FUT-175 ADMINISTERED IN THE ACUTE STAGE AFTER SUBARACHNOID HEMORRHAGE.



AU YANAMOTO H; KIKUCHI H; SATO M; SHIMIZU Y; YONEDA T; OKAMOTO S  
CS DEP. NEUROSURGERY, KYOTO UNIV. MED. SCH., KAWAHARA-CHO 54, SYOGIN,  
SAKYO-KU, KYOTO, JPN.  
SO NEUROSURGERY (BALTIMORE), (1992) 30 (3), 358-363.  
CODEN: NRSRDY.  
FS BA; OLD  
LA English